Closing the Opportunity Gap: A Call for Detracking Mathematics

A position statement from NCSM:
Leadership in Mathematics Education

Our Position

NCSM, Leadership in Mathematics Education, believes that all students should have access to high-quality instruction and post-secondary educational opportunities. While we acknowledge that many factors hinder such student access, in this position statement we call for the cessation of one clear, addressable factor: the practice of tracking. As a practice, tracking too often leads to segregation, dead-end pathways, and low quality experiences, and disproportionately has a negative impact on minority and low-socioeconomic students. Additionally, placement into tracks too often lacks transparency and accountability. Overall, tracking does not improve achievement but it does increase educational inequality. In light of this, NCSM calls instead for detracked, heterogeneous mathematics instruction through early high school, after which students may be well-served by separate curricular pathways that all lead to viable, post-secondary options.

Tracking: Policies and Practices Widening the Opportunity Gap

"Tracking is the practice of dividing students into separate classes for high-, average-, and low-achievers."[1] In practice, these might be considered low or high tracks, or some other, similar categorization, and students might be placed into

More generally, a number of studies point to the influence course-taking patterns have on academic outcomes.[3] This influence is true for student subgroups like emergent bilingual students[4] and students from low income backgrounds, different

Tracking is a form of de facto segregation as students in higher tracks have historically been predominantly White or Asian American from affluent families, whereas students in lower tracks have been primarily students of color and students who are economically disadvantaged. Research studies show that minority students are often denied access to high level mathematics through discriminatory [whether intentional or not] tracking and course placement.[6] Additionally, students in lower tracks usually "experience instruction that focuses on memorization and rote procedures."[7]

It is important to separate this position statement from the current pathways (or branching) conversations currently focused on re-thinking mathematics in the later years of high school. Examples of these include the Charles A. Dana Center's Launch Years Initiative at the University of Texas at Austin; NCTM's Catalyzing Change; Just Equation's Branching Out; and the Math Pathways report by the Center for American Progress. Such pathways are about equally rigorous mathematical experiences that are relevant to students' desired post-secondary experiences and also provide students opportunity to move between each pathway of courses when appropriate. NCSM supports work in this direction.

Because tracking often begins as ability grouping in the elementary school, there is a need to address tracking as well as the appropriate use of early acceleration in the elementary school. However, the focus of this first position statement in a series focused on closing the opportunity gap is on detracking mathematics in middle

Policies and Practices Reducing the Opportunity Gap: Detracking

Detracking is the intentional practice of placing students into heterogeneous classrooms usually in an effort to reduce the opportunity gap and allow all students to learn mathematics at high levels. Detracking requires the interruption of policies that have led to the inequitable sorting of students into mathematics courses. If detracking is to happen, school districts and states must go through the difficult process of establishing a new vision for mathematics teaching and learning that dispels the culture of "low" and "high" students as well as "faster means smarter." This will undoubtedly involve a change in educators' beliefs about who can and cannot do mathematics. School districts must be aware that teachers, coaches and leaders will need intense professional development before and during the process of detracking as well as continued support throughout. In addition, districts will need to communicate to parents and community stakeholders to assure them that students that have traditionally been in the "higher" levels of tracking will remain competitive with detracking.

The detracked mathematics courses will need differentiated instructional materials and approaches that support heterogeneous classrooms with students of varying levels, learning experiences and demographic backgrounds. This type of instruction will provide opportunities for students to demonstrate a balance of provide opportunities for mathematical discourse and increased contributions from students traditionally left out. Research also suggests that mathematics tasks which are group worthy and rich with detail are best suited for engaging students of all ability levels[9] and hence are well suited for use in heterogeneous classrooms.

As stated earlier, we acknowledge that the detracking of math courses alone will not create equitable math instruction. There is a myriad of variables contributing to the opportunity and achievement gaps and interacting with detracking policies.[10] Issues like systemic racism and stereotype threat[11], challenges with teacher

Recent Evidence from Research and Practice that Supports our Position

There are promising studies about schools and school systems which detracked their courses with positive effects, including specific advancements in students' opportunities to learn, teaching practices, and student achievement.[15] For example, Garrity found evidence to suggest that removing tracking and teaching all students grade while still offering acceleration for students who wish to pursue advanced math coursework later in high school. With San Francisco's graduating class of 2019 as the first group of students to experience this mathematics course pathway, starting with a full year of grade 8 CCSSM in heterogeneous classrooms, there is some early evidence of greater access to mathematics courses to students and more diverse students accessing higher levels of mathematics courses.

How All Stakeholders Can

- Sustained professional learning and coaching for teachers and leaders to develop the conditions needed for heterogeneity in mathematics courses and equitable teaching practices (i.e., diversity of thinking, growth mindset, student math identity development, etc.)
- Providing teachers time for collaboration about new instructional strategies to assist with differentiated teaching of rigorous mathematics that prepares students with a set of skills that centers on the communication

- Program and curriculum developers should:
    - Adopt existing or develop new content materials that support heterogeneous classrooms (i.e, group-worthy mathematics tasks, cognitively demanding mathematics tasks, etc.)
    - Develop a curriculum that is accessible to all students and addresses students' mathematics identity and agency (i.e., culturally relevant mathematics tasks, mathematics tasks with multiple entry points, etc.)
- Informal educators (all adults outside of the classroom

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